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A new species of the genus *Spherillo* (Crustacea: Isopoda: Armadillidae) from Sarawak

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サラワクで発見されたコシビロダンゴムシの新種

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サラワクから発見されたコシビロダンゴムシの1種を新種 *Spherillo tsukamotoi* として記載した。本種は胸部前半の形態などにより *Spherillo* 属に入るものであり, *S. tomiyamai* (Nunomura, 1991) と類似するが, (1) 胸肢の剛毛は全て単純で, 二又もしくは三又したものが含まれないこと, (2) オス第1腹肢外肢がいつそう細いこと, (3) 目を構成する個眼が多いこと, (4) 大顎の臼歯状突起が剛毛状ではなく房状をなすこと, 及び (5) 第1触角の感覚剛毛が第3節の側縁にあること等によって区別される。

本種はマレーシアなど東南アジア各地から記録されている *Spherillo velutinus* と類似するが, (1) ♂第1腹肢の先端の小歯がより多いこと, (2) ♂第1腹肢外肢が長方形であること, (3) 額がより広いこと, (4) 目が大きく, より多くの個眼からなること等によって区別される。

なお, 本種のホロタイプは富山市科学文化センター (TOYA Cr-13087) で保管される。

Key words : Isopoda, Armadillidae, *Spherillo*. New species, Taxonomy, Sarawak

キーワード : 等脚目, ワラジムシ目, コシビロダンゴムシ科, 分類学, 新種, サラワク

During the ecological survey in Sarawak, Dr. Jiro Tsukamoto of the Education and Research Center for Subtropical Field Science, Kochi University, found an armadillid species, together with some terrestrial isopod crustaceans and they were sent to me for identification. As the results of closer examination of mine, I found an unfamiliar species and it proved to represent a new species. It will be described as a new species, *Spherillo tsukamotoi*.

Order Isopod
Oniscidea Latreille, 1803
Family Armadillidae
Spherillo tsukamotoi, n. sp.

(Fig. 1)

Description of male: Body (Fig. 1A) long, 2.0 times as wide. Surface smooth. Color dark-brown in alcohol. Eyes mediocre in size. each eye composed of 24-25 ommatidia. Cephalon with lateral projection lobe protruded. Schisma (Fig. 1C) on pereonal somite big. Pleotelson (Fig. 1U) hour grass-shaped; posterior end rounded.

Antennule (Fig. 1D): terminal segment with 6 aesthetascs at the tip. Antenna (Fig. 1E) reaches the posterior end

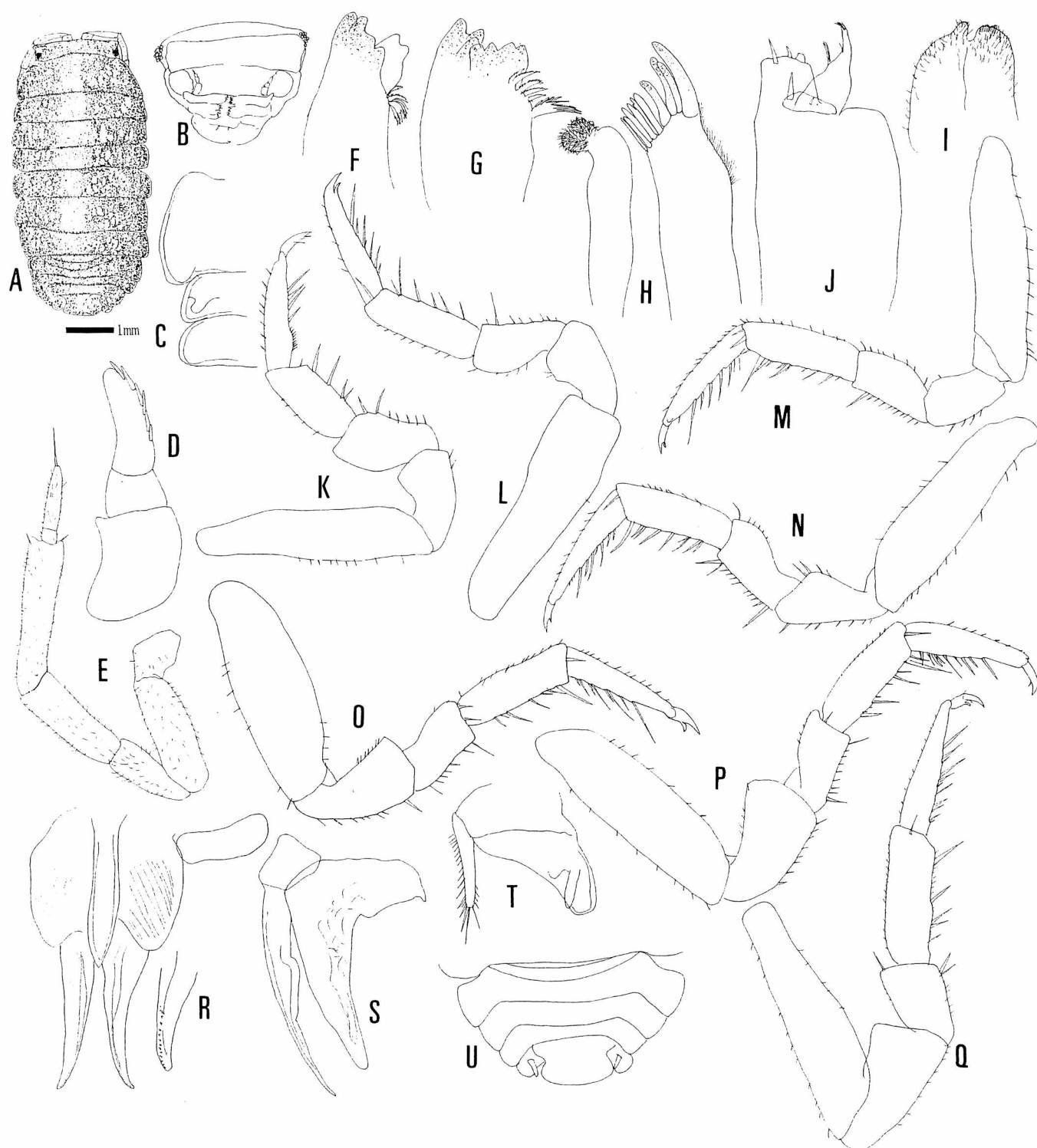


Fig.1 *Spherillo tsukamotoi*, n. sp.

A: Dorsal view; B: Anterior view of cephalon; C: Schisma of pereonial somite. D: Antennule; E: Antenna; F: Right mandible; G: Left mandible; H: Maxillula; I: Maxilla; J: Maxilliped; K-Q: Pereopods 1-7; R: Penes and male first pleopod; S: Male second pleopod; T: Uropod; U: Pleotelson and pleonal somites in dorsal view (All: Holotype male).

of pereonite 2; relative length 5 peduncular segments is 4: 10: 7: 9: 13; flagellum, half the length of 5th peduncular segment, consists of 2 segments: relative length of 2 flagellar segments 1: 4.8.

Right mandible (Fig. 1F): pars incisiva 2-toothed; lacinia mobilis not ciliated and 4-toothed; 2-3 hairy bristles; processus molaris represented by a tuft of long setae. Left mandible (Fig. 1G): pars incisiva 3-toothed; lacinia mobilis

chitinized and 2-toothed; 3 hairy bristles; processus molaris represented by a tuft of long setae. Maxillula (Fig. 1H): outer lobe with 10 simple teeth at the tip; inner lobe with 2 plumose setae. Maxilla (Fig. 1I) rather slender, with many fine setae. Maxilliped (Fig. 1J): palp with only distinct basal distinct segment, other segments fused; endite row and triangular.

Pereopod 1 (Fig. 1K): basis 4.4 times as long as wide, with 9-10 short setae on inner margin; ischium $2/5$ as long as basis, with 2 setae on outer margin; merus as long as ischium, with 7 setae on inner margin; carpus as long as merus, with 4-5 setae on inner margin and 5-6 short setae on outer margin; propodus 1.1 times longer than carpus, with 8 shorter seta on basal half and 4 longer seta on distal half of inner margin, 8 setae on outer margin.

Pereopod 2 (Fig. 1L): basis 3.3 times as long as wide; ischium $2/5$ as long as wide, with 2 setae on outer margin; merus a little shorter than ischium, with 8 setae including a long one on inner margin and 5 setae on outer margin; carpus half the length of basis, with 6 setae on inner margin a seta on distal margin and 5-8 setae on outer margin; propodu as long as carpus, with 6 longer setae on inner margin.

Pereopod 3 (Fig. 1M): basis 3.8 times as long as wide, with 11 setae on inner margin; ischium $2/5$ as long as basis, with 4-5 setae on inner margin; merus as long as wide, 11 setae on inner margin and 8-9 setae on outer margin; carpus 1.5 times longer than merus, with 10 setae on inner margin, 3 setae on distal margin and 9-10 setae on outer margin; propodus a little longer than carpus, with 7-8 setae on inner margin and 15-16 setae on outer margin.

Pereopod 4 (Fig. 1N): basis 3.5 times as long as wide, with 11-12 setae on inner margin and 5-6 setae on outer margin; ischium $2/5$ as long as basis, with 7 setae on inner margin and 4 setae on outer margin; merus a little shorter than ischium, with 10-12 setae on inner margin and 7-8 setae on outer margin; carpus 1.5 times longer than merus, with relatively long 8-9 setae on inner margin, a seta on distal margin and 8-9 setae on outer margin; propodus, with 10 setae including 3 distal shorter ones on inner margin, and 7 setae on outer margin.

Pereopod 5 (Fig. 1O): basis 3.0 times as long as wide, with 4-7 setae on both margins; ischium half the length of basis, with 8 setae on inner margin and 7-8 setae on outer margin; merus $2/3$ times as long as ischium, with 7 setae on inner margin and 2 setae on distal margin; carpus 1.5 times longer than merus, with 6 long setae on inner margin, a seta on distal margin and 13-15 short setae on outer margin; propodus as long as carpus, with 8 setae including a very long one on inner margin and 12 shorter setae on outer margin.

Pereopod 6 (Fig. 1P): basis 3.6 times as long as wide, with 8 setae on both margins; ischium half the length of basis, with 8-9 setae on inner margin and 5-6 setae on outer margin; merus 55% as long as ischium, with 9-10 setae on inner margin, a seta on distal margin and 5-6 setae on outer margin on outer margin; carpus as long as ischium, with 3 longer and 5-6 shorter setae on inner margin, a seta on distal margin and 11-12 short setae on outer margin; propodus as long as carpus, with 9 setae on inner margin and 8-10 short setae on outer margin.

Pereopod 7 (Fig. 1Q): basis 4 times as long as wide, with 5 setae on inner margin; ischium $3/5$ as long as basis, with 6-7 setae on inner margins a seta at outer distal angle; merus as long as merus, with 2 setae at inner distal angle and a seta at outer distal area; carpus $3/5$ the length of basis, with 5-7 setae on inner margin and a seta on distal margin; propodus as long as carpus, with 10-11 setae on inner margin and 11-12 spinules on outer margin.

Penes (Fig. 1R) stout and rounded, distal area cleft.

Pleopod 1 (Fig. 1R): endopod stout, with 8 denticles on inner distal area; exopod rectangular, $1/3$ as long as wide.

Pleopod 2 (Fig. 1S): endopod straight, a little longer than exopod; exopod triangular, with a right angled on outer margin.

Uropod (Fig. 1U): basis rectangular; endopod slender, with more than 15 setae on inner margin, 4-5 setae on distal half of outer margin; exopod $2/5$ as long as endopod.

Female: Roughly similar to male except for copulatory apparatus.

Material examined: 6♂♂ (1♂ holotype, 7.0 mm in body length and 5♂♂ paratypes, 5.1-7.3mm in body length and 7 ♀♀ (1♀ allotype, 7.6 mm in body length, 6 ♀♀ paratypes, 5.2-8.1 mm in body length), West of Kuching, Sarawak, Malaysia (1° 32'N, 1° 05'4"E) alt. ca, 30m, artificial forest of *Acasia mangium*, Aug. 2001, coll. Jiro Tsukamoto.

Type series is deposited as follows: Holotype (TOYA Cr-13087), allotype (TOYA Cr-13088) and 7 paratypes (TOYA Cr-13089~13095) and 5 paratypes (NSMT Cr-16238) at the National Science Museum, Tokyo.

Etymology: The species name is dedicated to the collector, Dr. Tsukamoto, Kochi University.

Remarks: As far as I am aware, 92 species have been known as valid. The present new species is most closely allied to *S. tomiyamai* (Nunomura, 1991) reported from Bonin Islands, Japan but the former is separated from the latter in the following features: (1) absence of bifid and trifid setae, (2) narrower exopod of male first pleopod (3) numerous ommatidia of eyes, (4) tuft-shaped processus molaris of mandible, (5) Presence of aesthetascs on the lateral margin of stand segment on antennule.

The present new species is also allied to *Spherillo velutinus* (Dollfus, 1898) from Malaysia and other areas of Southeastern Asia, but the former is separated from the latter in the following features: (1) numerous denticles of endopod of male first pleopod, (2) rectangular exopod of male first pleopod, (3) wider forehead and (4) bigger eyes consisting of numerous ommatidia.

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